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Flying Operations

E-8--OPERATIONS PROCEDURES



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This volume implements policy guidance in AFD 11-2, *Aircraft Rules and Procedures*; AFD 11-4, *Aviation Service*; and AFI 11-202V3, *General Flight Rules*. It provides the basis for worldwide employment of the E-8 Joint Surveillance Target Attack Radar System. This volume is not applicable to the Air National Guard or the Air Force Reserve Command. All aircrews will follow this volume which prescribes standard operating procedures and restrictions. Complementary references are included. Commanders must ensure that individuals are fully qualified according to all applicable directives prior to being utilized as combat mission ready/basic mission capable crewmembers. Commanders will provide aircrews with sufficient planning factors to ensure mission accomplishment. Flying safety will not be compromised. Issue this volume to E-8 aircrew members in accordance with local procedures. MAJCOMs/DRUs/FOAs are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ AFFSA/XOF, through HQ ACC/XOFR, for approval prior to publication IAW AFD 11-2. Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM/DRU/FOA to HQ AFFSA/XOF, HQ ACC/XOFR, and the user MAJCOM/DRU/FOA offices of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review. **NOTE:** The terms direct reporting unit (DRU) and field operating agency (FOA), as used in this paragraph, refer only to those units that report directly to HQ USAF. Keep supplements current by complying with AFI 33-360V1, *Publications Management Program*. See paragraph 1.4. of this volume for procedures on how and where to submit recommended changes to this publication. **NOTE:** This volume supersedes 93rd OG OI 11-2E8V3, 1 February 1999. Maintain and dispose of all records created as a result of processes prescribed by this instruction IAW AFMAN 37-139, *Records Disposition Schedule*.

This volume contains references to the following field (subordinate level) publication which, until converted to a departmental-level publication, may be obtained from the respective MAJCOM (ACC) publishing office:

ACCI 21-101, *Objective Wing Aircraft Maintenance*

SUMMARY OF REVISIONS

This revision incorporates IC 2001-01. This change transfers OPRship to ACC/DOYA. It also revises augmented crew requirements for mission crew members. A “|” indicates revised material since the last edition.

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Chapter 1

INTRODUCTION

1.1. Aircrew Responsibility. In conjunction with other governing directives, this volume prescribes operating procedures for E-8 aircraft under most circumstances, but it is not a substitute for sound judgment or common sense. Operations or procedures not specifically addressed may be accomplished if they enhance safe, effective mission accomplishment.

1.2. Deviations. Deviations from this volume require specific approval of the MAJCOM/XO unless an urgent requirement or an aircraft emergency dictates otherwise, in which case the pilot in command, or instructor, will take the appropriate action to safely recover the aircraft.

1.3. Waivers. Forward waiver requests through NAF to the HQ ACC/XO/XOFR for approval. Waivers, if approved, will be issued for a maximum of 1 year from the effective date. Information copies of approved waivers will be provided to the other NAF OPRs. Any waivers that effect mission crewmembers will be coordinated by HQ ACC/XOFR with HQ ACC/XOYA.

1.4. Recommended Changes. Recommendations for change to this volume will be submitted on AF Form 847, **Recommendation for Change of Publication**, and forwarded according to AFI 11-215, *Flight Manuals Program*. HQ USAF/XO is approval authority for interim changes (IC) and revisions to this instruction.

1.5. Abbreviations, Acronyms, and Terms. See [Attachment 1](#).

Chapter 2

MISSION PLANNING

2.1. Mission Development/Planning. The squadron Director of Operations (DO) or Detachment Commander (DETCO), if applicable, will actively direct the execution of the units flying schedule. The DO will ensure that all operations personnel (stan/eval, training, scheduling, life support, and Operations Readiness Center [ORC]) provide crews with the requisite support, time, and materials to plan and execute their mission. The DO will ensure crews/mission planners have no barriers or distractions to mission planning to included noise, office work and meetings and ensure that every mission is thoroughly planned, briefed, executed and debriefed.

2.1.1. Scheduling. Peacetime execution of the squadron's flying schedule shall focus on evaluations, crew training, and accomplishment of AFI 11-2E-8V1, *E-8 Aircrew Training*, currency and Ready Aircrew Program (RAP) requirements. Current Operations shall develop a robust and challenging training scheme that provides training to all crew positions to the maximum extent possible. Each squadron will develop a squadron instruction that details the mission development process. If, in the DO's judgment, a sortie provides insufficient training opportunity due to a lack of training assets, the sortie should be delayed or canceled.

2.1.2. Mission Planning. The DO may choose from three planning profiles when directing the flying operation: mission plan/fly, same day mission plan/fly, and show and go. The squadron's flying schedule will clearly annotate the method directed for planning on the weekly and daily schedules.

2.1.2.1. Mission Plan/Fly. This profile provides each crew an eight hour mission planning opportunity, normally held the duty day prior to execution. It provides the maximum training opportunity for crews to thoroughly familiarize themselves with taskings and objectives. Instructors are provided the maximum opportunity to work directly with their students as they plan, execute and debrief their missions.

2.1.2.2. Same Day Mission Planning. This profile is the preferred method for pilot proficiency (P-sorties). However, there may be certain circumstances (i.e., operational check flights, ferry flights or other short notice events/taskings) that drive the DO to direct this method.

2.1.2.3. Show and Go. This profile most closely resembles contingency operations. This planning method will only be used for CMR/BMC crewmembers, and MQT or N-CMR/N-BMC crewmembers properly supervised IAW AFI 11-2E-8V1. Show and go profiles will not be used for initial qualification training. Show and go profile missions are planned by a Mission Planning Team (MPT). Each squadron will develop a comprehensive instruction detailing the inputs to and products from the MPT. Normally, crews will be afforded a minimum of 1.5 hours (N/A for FE, AMSS, CST) for briefings and review mission materials prior to step.

2.1.2.3.1. Mission Planning Team (MPT) Makeup. The MPT works directly for the DO. A mission planning team is composed of a minimum of nine aircrew: Pilot, NAV/DSO, FE, MCC, SD, DMCC, AIO or AIT, CST, and AMSS. The DO may include additional team members, i.e., Army personnel as required by the mission tasking and workload.

2.1.2.3.1.1. All MPT members must be qualified in their crew positions but can be DNIF.

2.2. Navigational Charts and Flight Plans:

2.2.1. Navigational charts will be annotated to reflect:

2.2.1.1. Special use airspace within the altitude structure and within 50 nautical miles (NM) of the planned route of flight. Those portions of the route that are conducted on established airways by reference to FLIP enroute charts and pilot's radio navigation instruments need not be annotated. On airways, the NAV/DSO may correlate special use airspace directly from the FLIP charts. Restricted and Warning Areas adjacent to coastal operating areas will be annotated.

NOTE: Units will, if necessary, specify flight plan requirements and procedures in their local chapters to meet specialized mission requirements.

2.2.1.2. Emergency airfields sufficient to cover the area of flight.

2.2.1.3. High terrain within 50 NM of planned route of flight and 25 NM of departure/arrival base.

2.2.1.4. Local Area (on ONC or larger scale chart) that sufficiently covers the planned departure and arrival, and includes the highest terrain or obstacle within 25 NM.

2.2.1.5. Navigational charts will be at the navigator's and pilot's stations.

2.2.2. The AC is responsible for the content and accuracy of flight plans. All flights will be planned at speeds and altitudes that maximize fuel and aircraft performance unless mission profile demands otherwise. Reference paragraph 3.13. of this volume for mission orbit planning.

2.3. Mission Planning Briefings/Meetings. The mission briefings required and sequence presented depends on planning profile selected. Detailed mission planning guides/slides for each briefing will be outlined in [Chapter 6](#), Local Operating Procedures, of this volume. These guides will contain the minimum required briefing items. For P-sortie planning, units may tailor their flight crew specialized briefing certificates (reference paragraph 2.4.1.) to encompass all required mission planning requirements/briefings except the post mission briefing.

2.3.1. Mission Planning Briefing. (Required for mission plan/fly or same day mission planning profiles) On mission planning day, as a minimum, key aircrew personnel (AC, NAV, MCC, DMCC and SD) will attend a mission planning briefing. The SQ/DO or representative will brief key personnel on all pertinent information in regards to the sortie. Changes to scheduled flight activity and/or crew changes should be addressed.

2.3.1.1. After the mission planning briefing, the MCC and AC are responsible for thorough and efficient mission planning activities and attendance of all required personnel.

2.3.1.2. For formation flights, the formation leader will coordinate with other flight members regarding all aspects of the formation part of the mission to include: route, altitudes, control times, rendezvous points, lost wingman procedures and communications plan.

2.3.2. Specialized Briefing/Coordination Meeting. (Required for all mission planning profiles.) A flight crew specialized briefing and mission crew coordination meeting must be accomplished. These briefings will cover detailed information and will bring together crew specific data used in the mission summary briefing. For show and go profiles, these briefings may be conducted after the mission summary briefing.

2.3.2.1. Flight Crew Specialized Briefing. Units will develop and utilize a mission planning certificate to ensure proper and thorough mission planning. Units may further develop their certif-

icates to encompass all required mission planning requirements/briefings (except post mission briefing) for P-sortie planning. This certificate will be published in **Chapter 6**, Local Operating Procedures, of this volume. As a minimum, crews will review materials necessary to accurately and completely fill out the mission planning certificate. A copy of this certificate along with any flight risk assessment worksheets will be turned in to the SQ/DO or designated representative. A sample mission planning certificate containing the minimum briefing items is given in **Attachment 2**. As a minimum, the pilots and the NAV/DSO will attend this briefing.

2.3.2.2. Mission Crew Coordination Meeting. The coordination meeting is a working group meeting identifying or reviewing/checking mission requirements, aircrew needs and/or problems. The MCC coordinates with operations, intelligence, self-defense, Army and system management to review their roles and mission objectives. This is not a slide presentation briefing of which like items are merely repeated in the Summary Brief. Detailed discussion and coordination/review is accomplished here in order to perform the assigned mission. If the mission crew coordination meeting cannot be deconflicted with the flight deck specialized briefing, the NAV/DSO will attend the flight deck specialized briefing unless excused by the AC.

2.3.3. Mission Summary Briefing. (Required for all mission planning profile.) The MCC and AC (or MPT personnel for show and go profiles) will conduct a mission summary briefing. This briefing is mandatory for all crewmembers planning to fly the mission. Attendance can only be excused by SQ/DO or higher authority.

2.3.3.1. The summary briefing will bring together the entire crew's or MPT's mission planning efforts.

2.3.3.2. If applicable, a formation briefing is required for all flight crew in the formation. This briefing will cover mission specific items and non-standard items (**Attachment 3**).

2.3.3.3. The MCC and AC (or MPT personnel for show and go profiles) must rebrief the mission when the time interval from the summary briefing to the crew report time exceeds 72 hours. The 72-hour re-brief will cover summary briefing items.

2.3.4. Pre-Mission Briefing. (Required for mission plan/fly profile.) The MCC and AC will designate a time and place for the crew to assemble on the day of the mission. The pre-mission briefing will review the weather, NOTAMS and any flight data or mission changes. FE, AMSS and CSTs may be excused to perform pre-flight duties at MCC and AC discretion.

2.3.4.1. For formation flights (collocated units), the formation leader will conduct the cell/formation briefing. If a specialized formation briefing was conducted during the mission briefing phase, the briefing will cover items requiring review, changes in formation procedures and tactics. This briefing is not required for standard air refueling activity.

2.3.5. Post Mission Briefing. (Required for all mission planning profiles.) The maintenance debriefing will be conducted as soon as practical after engine shutdown. As a minimum; the AC, FE, MCC, AMSS, CST will attend. Crewmembers making a 781 write-up will attend in order to answer any questions with regards to the discrepancy. All necessary maintenance and CSS personnel will be at the maintenance debrief.

2.3.5.1. The MCC and AC will contact the intelligence flight whenever hostile, suspect, or Spectrum Interference Report (SIR) activity is encountered during a mission.

2.3.5.2. The MCC and AC will, as soon as practical after the mission, conduct a post mission debrief with the entire crew present.

2.3.5.3. The AC will conduct a post mission flight crew debrief after the entire crew debrief.

2.3.5.4. The flight crew will perform/attend a formation debrief, when applicable.

2.4. Crew Report Times. Crew report times will allow sufficient time to accomplish all pre-mission activities. Squadron's will develop and publish a standard mission timeline that takes the crew from show time through an on-time takeoff. Normally, the FE , AMSS, and CSTs will arrive at the aircraft NLT 1.5 hours prior to the scheduled takeoff time. Normally, crew show at the aircraft for all other crewmembers will be NLT 1 hour prior to the scheduled takeoff time.

2.4.1. For P-sorties that are planned and flown on the same day, a minimum of a 3-hour show time will be used to accomplish P-sortie mission planning and pre-takeoff duties.

2.4.2. As a minimum, the AC, FP or CP, and NAV/DSO (may be N/A for P-sorties) will attend the weather briefing.

Chapter 3

AIRCREW OPERATING PROCEDURES

3.1. General. The AC is responsible for the safe, effective conduct of flight operations and the safety of the aircrew and passengers. The aircrew is responsible to the AC for the safe, successful accomplishment of all flight activities. That portion of the flight directly affecting the accomplishment of the E-8 mission will be coordinated with the MCC. This chapter contains operating procedures that are applicable to the entire aircrew.

3.2. Minimum Crew Manning. Minimum qualified flight crew is specified as a qualified AC, FP or CP, and FE. The OG/CC or higher will determine conditions that warrant minimum flight crew manning on a case-by-case basis. For the purpose of this volume, a FP is defined as a mission qualified pilot, administratively restricted from performing as the AC. For training squadrons, an IP with a UP enrolled in a formal course of training, satisfy the pilot requirement.

3.2.1. Minimum crewmembers required to initialize and operate the mission systems in flight will include: NAV/DSO, MCC, SMO, 2 AMSS, and 2 CST.

3.3. Aircrew Duty Period/Augmentation:

3.3.1. Aircrew Duty Period is 16 Hours. Augmented aircrew duty period is 24 hours. With any axis of the autopilot inoperative, limit the aircrew duty period to 12 hours and the augmented aircrew duty period to 16 hours.

3.3.1.1. An augmented flight crew will consist of a qualified pilot, navigator, and flight engineer in addition to the normal flight crew. Addition of flight crewmembers after the first takeoff in a crew duty period is not considered augmentation.

3.3.1.2. The operations group commander will determine the augmented mission crew composition depending upon mission requirements.

3.3.2. An augmented flight crew will consist of a current and qualified AC, NAV/DSO and FE in addition to the normal flight crew. If a mission is tasked for 8 hours of on station, or potential to exceed 8 hours, then the mission crew will be augmented. Minimum augmentation of a standard mission crew consists of one additional current and qualified AIO/T, AMSS, and SD.

3.4. Crew Rest for Deploying/Redeploying Aircrews (Overseas Locations). Ground time between landing and subsequent takeoff will not be planned for less than 18 hours, unless waived by OG/CC or equivalent. The 18-hour crew rest requirement does not apply to "Op stops" made within an aircrew duty period.

3.5. Transition Duty Day Restrictions. Transition duty day period (reference AFI 11-202V3 and applicable MACJOM supplement) applies to pilots, NAV/DSO, and FE.

3.6. Minimum Equipment. Unit OGV's will develop a Minimum Equipment Listing (MEL) for use by all crews as a guide to determine operable equipment necessary for safe flight. Flying squadrons will ensure a copy of the MEL is on board each aircraft.

3.7. Transportation of Passengers. The AC is responsible for safe transportation of passengers and/or distinguished visitors. He/she may designate a crewmember(s) to perform required duties. As a minimum, the AC or designated individual will utilize the passenger briefing guide ([Attachment 4](#)).

3.8. Loading/Off Loading. All engines will be shutdown if large amounts of baggage must be loaded or removed. Units will specify loading and off loading crewmembers during engine running crew change (ERCC) procedures in [Chapter 6](#) of this volume.

3.9. Flying Clothing. Minimum flight clothing requirements will be determined by SQ/CCs IAW AFI 11-301, [Chapter 4](#). This may be accomplished via an FCIF item. All crewmembers will wear nomex flying gloves during engine start, taxi, takeoff, landing, ERCC, when performing emergency procedures and when directed by the AC. When flight gloves hinder completion of required emergency actions, they may be removed.

3.10. Equipment Storage. It is the responsibility of each crewmember to store/secure their personal and professional equipment carried onboard. Equipment will be kept clear of all entry doors, hatches and all emergency equipment during all ground and flight operations. The FE will ensure that these areas are clear of obstructions during their preflight inspection.

3.11. Aircraft Security. The AC is responsible for ensuring aircraft security is provided at destination and enroute stops. The aircraft will be secured as a priority B resource according to AFI 31-101V1, *The Air Force Physical Security Program*. This requires an entry controller (at least one per every two aircraft) and restricted access. A copy of the flight orders will be provided to the entry controller as a means to identify persons authorized entry to the aircraft.

3.11.1. The MCC is responsible for the security of classified mission documents and disks. While deployed or during enroute stops, classified mission documents and disks can be stored on the aircraft when U.S. security personnel are used as the entry controller. In the event a stop is made at a location where no U.S. security personnel are based, the MCC will designate, as a minimum two crewmembers to remain on the aircraft with the disks and classified mission documents to provide security.

NOTE: Storage specifications for removable transportable memory modules (RTMM) are -134 to 185 degrees F, and 98 percent and below relative humidity with condensation.

3.12. Mandatory Communications/Radio Calls. The AC is responsible for the following radio calls to be made to the applicable command post or controlling authority.

3.12.1. Maintenance discrepancies which may delay takeoff.

3.12.2. Inoperative equipment that affects operational capability.

3.12.3. Engine start time (at least 10 minutes prior to engine start to allow notification of Central Security Control/CSC).

3.12.4. Actual takeoff time.

3.12.5. Post A/R information (C sorties only).

3.12.6. On station time.

3.12.7. Off station time and ETA.

3.12.8. Maintenance Codes. Pass maintenance codes as soon as practical via any means available (i.e., DGSS or HF). The MCC will consolidate the Maintenance Codes (Aircraft Landing Status and System Capability Codes) and pass them for transmission. Aircraft Landing Status and System Capability Codes as defined in ACCI 21-101, *Objective Wing Aircraft Maintenance*, will be used.

3.12.9. Anytime a major change, malfunction, or incident occurs that will adversely affect mission accomplishment.

3.12.10. Actual landing time, CSC (Central Security Control) clearance and parking spot will be coordinated after landing with the command post or appropriate agency.

3.13. On-Station Procedures. Mission orbits will normally be flown at speeds commensurate with effective radar performance. When determining orbit airspeed, maintain a balance between energy management and mission requirements. If station time is critical, fly a speed and power setting that maximizes fuel endurance given aircraft weight and altitude. If station time is not critical, then favor radar performance relative to fuel management/conservation. The pilot and MCC will coordinate in cases where mission requirements dictate a specific (higher) ground speed. Optimum ground speed for radar performance is 450 plus or minus 60 knots.

3.13.1. Aircraft position will be coordinated between the AC, MCC, and NAV/DSO. Aircraft position monitoring relative to a preplanned track is the responsibility of both the flight crew and mission crew.

3.13.2. The NAV/DSO, in coordination with the AC, will establish a radio navigation fix if available or line of position/no fly beyond line between the closest point of the E-8 orbit and the threat/no fly area for all E-8 orbits.

3.13.3. All crewmembers will wear ear protection when entering the lower compartments, and at least one crewmember will maintain communication with the flight crew and/or mission crew.

3.14. Aircraft Recall/Diversion. Recall or diversion of any E-8 will be challenged using the appropriate authentication for the theater of operation. Authentication is not mandatory on P-sorties.

3.15. Practice Emergency Drills. The intent of the practice emergency drill is to re-familiarize crewmembers with the location and function of emergency equipment and to help develop effective crew coordination and procedures in the event of an actual emergency. The practice emergency drill should be designed to facilitate the thought process associated with a particular emergency to include potential problems that could arise. The following procedures apply:

3.15.1. All practice emergency drills will be thoroughly planned and briefed during mission planning.

3.15.2. The AC will make a PA announcement prior to commencing and terminating practice emergency drills. The actual drill normally will start within twenty minutes of announcement.

3.15.3. Drills will be designed to maximize training yet minimize any associated hazards. Sound judgement and safety will be considered.

3.15.4. No doors or hatches will be opened. Normally, equipment status will not be changed; however, if the practice emergency drill is performed after calling "off station," then a normal equipment power down sequence may be incorporated into the drill.

3.15.5. Passengers and/or distinguished visitors will be thoroughly pre-briefed and will not participate (individuals may don passenger oxygen masks if desired).

3.16. Aircraft Cleanliness. It is the MCC and AC's responsibility to ensure the aircraft is left clean, orderly, and free of foreign objects (FOD) after every mission.

3.17. Aircraft Boarding and Configuration for Static Display. Under normal operations, aircraft entry doors will be closed prior to placing or removing any boarding stands. Furthermore, whenever an E-8 is on static display and opened for public viewing, there will be a passenger boarding stand or air stairs at each main entry door. If it is not possible to have a stand or stairs at each main entry door, the aircraft will not be opened for mass walk-throughs. Hatches will only be opened when an aircrew member is positioned at the hatch or the hatches are roped off. ACs and MCCs will ensure proper safety/security precautions are taken to protect the aircraft, passengers and crew. Command instructions concerning participation in static displays and aerial events provide further guidance.

3.18. Aircraft Regeneration and Alert Procedures:

3.18.1. The DO will make the final determination as to any required alert status given current number of deployed aircraft, crew manning and the theater commander's guidance. Normally, two crews will be assigned to an aircraft along with a staff crew. For missions that require an accelerated launch or when crew duty day is a concern, the staff AC, FE, AMSS, and CST (preflight crew) will normally perform a full preflight for the oncoming aircrew (reference paragraph [3.18.2.1.](#)).

3.18.2. Aircrew cocking procedures for ACs, FEs, NAV/DSOs, AMSS, and CSTs are established under cocking procedures in all abbreviated flight crew checklists (or applicable aircrew aids). There are three different alert configurations--Condition I (CC-1), Condition II (CC-2), and Condition III (CC-3).

3.18.2.1. Cocking Condition I (CC-1) prepares the airplane and PME equipment for a rapid launch when there is a general idea of the required takeoff time (approximate 2 hour window). Preflight is performed by the staff or a preflight crew and is accomplished with power and air conditioning on, RADAR, O&C (Operations and Control) and communication subsystem powered up with ORT (Operations Readiness Testing) completed. All normal preflight inspections are completed utilizing normal preflight procedures as well as completing the BEFORE START CHECKLIST. An AC, FE, AMSS, and CST will remain with the aircraft at all times after cocking until accepted by the oncoming crew.

3.18.2.2. Cocking Condition II (CC-2) prepares the airplane for an operational mission launch in minimum time. All normal preflight inspections are completed utilizing normal preflight procedures up to and including the BEFORE START CHECKLIST, and the COCKING CHECKLIST. The AMSS performs preflight checks up to the EQUIPMENT POWER-ON checklist and the CST performs up to the CONSOLE ASSIGNMENT portion of the checklist. The aircraft remains cocked with power removed and hydraulic pumps off. Launching the aircraft is accomplished by utilizing the ALERT LAUNCH CHECKLIST.

3.18.2.3. Cocking Condition III (CC-3) is a survivability launch, only the airplane (not PME) is prepared for launch. All normal preflight inspections are completed utilizing normal preflight procedures up to and including the BEFORE START CHECKLIST, and the COCKING CHECKLIST. This checklist may also be used as a "buddy preflight" to minimize ground crew duty

delays. The aircraft remains cocked with power removed and hydraulic pumps off. Launching the aircraft is accomplished by utilizing the ALERT LAUNCH CHECKLIST.

3.18.3. When theater guidance demands a no-notice launch capability, a designated aircraft will be cocked and be made ready for a contingent no-notice launch. The DO will make the determination as to which Cocking Condition (I, II, or III) the aircraft will be configured. Following a mission, maintenance will be afforded the minimum time required to regenerate the aircraft. The applicable aircrew members that flew the previous mission (or the staff aircrew) will perform the cocking procedures.

3.18.3.1. Once the AC, FE, AMSS, CST and crew chief have determined the aircraft is cocked, the AC will annotate in the aircraft forms, (AFTO Form 781, **AFORMS Aircraft/Mission Flight Data Document**), the date, time and expiration of the cocking condition then seal the aircraft. Further access to the aircraft will not be granted without AC permission. Persons entering the cocked aircraft must be escorted by the AC. Any maintenance which would result in longer than a 10 minute delay to launch will create an 'uncocked' status. No maintenance will be performed in the interior or exterior of an alert aircraft unless specifically authorized by the AC and at least one crewmember who is knowledgeable in the area in which maintenance is to be performed is present. The staff AC, FE and/or AMSS and CST will verify the alert status by accomplishing the necessary preflight steps associated with the maintenance action. A new 'cocked on' call and annotation in the aircraft forms may be necessary.

3.18.3.2. If the airplane does not launch within 72 hours, a new maintenance/flight crew preflight to the required level (i.e. CC-1, CC-2, or CC-3) will be performed.

3.18.3.3. RE-COCKING. If a takeoff is not made from alert launch, perform the AFTER LANDING, ENGINE SHUTDOWN, BEFORE START, and COCKING CHECKLIST CC-2, CC-3.

3.18.3.4. DE-COCKING. To de-cock the aircraft, perform the AFTER LANDING, and ENGINE SHUTDOWN CHECKLISTS.

Chapter 4

FLIGHT CREW OPERATING PROCEDURES

4.1. General. This Chapter contains operating procedures applicable to the flight crew. This information is in addition to AFI 11-202V3, AFI 11-401 (*Flight Management*), and applicable MAJCOM supplements.

4.1.1. For the purposes of this volume, critical phases of flight are defined as takeoff, air refueling, approach, landing, emergencies and flight below 3000 feet AGL. Only instructor/SEFE qualified pilots, NAV/DSOs and FEs are authorized to stand during critical phases of flight when necessary to supervise crewmembers or when conducting flight evaluations.

4.1.2. Altitude Monitoring. All flight crewmembers are responsible for altitude monitoring. When climbing or descending, the pilot not flying or NAV/DSO will call out 2,000 feet and 1000 feet above/below level off altitude and approaching level. While operating at less than 2,000 feet above the ground, any flight crewmember will inform the pilot of any deviation of more than 100 feet from assigned altitude, or if the aircraft appears to be dangerously close to terrain or obstructions.

4.1.3. Icing Restrictions. E-8 aircraft will not fly in reported severe icing conditions any time. If inadvertently encountered, the pilot will immediately depart such conditions. Short climb or descent through areas of forecast severe and/or reported moderate icing is permitted; however, sustained flight in these conditions is prohibited.

4.1.4. Turbulence Restrictions. E-8 aircraft will not fly in areas of forecast or reported severe turbulence. Every effort will be made to avoid areas of reported moderate turbulence. If moderate turbulence is forecast along planned route of flight, the AC will coordinate with weather personnel as to the best course of action to vacate the condition, if encountered.

4.1.5. Thunderstorm Avoidance. Pilots will neither file a flight plan route nor fly into an area of known or forecast thunderstorm activity when the weather radar is inoperative or unusable and thunderstorm activity cannot be visually circumnavigated.

4.1.6. Fuel Requirements. All missions will be planned to arrive overhead destination/worst case alternate fix with no less than 15,000 pounds fuel reserve, or in accordance with AFI 11-202V3; whichever is greater.

4.1.6.1. Minimum landing fuel is 12,000 pounds. If it becomes apparent the aircraft will not land with 12,000 pounds of fuel remaining, declare "Minimum Fuel" and land short of destination; or divert as required.

4.1.6.2. Emergency landing fuel is 10,000 pounds.

4.1.7. In-flight Meals. Due to the possibility that either pilot could be incapacitated by food poisoning if both consumed contaminated foods, the pilots will not consume military box lunches containing the same prepared ingredients within 1.5 hours of each other before or during flight. Frozen meals which are cooked prior to consumption, sealed in-flight (IF) rations, fruits, and commercially prepared and sealed items have a much lower potential for bacterial contamination; and may be common to both pilot's lunches.

4.1.8. Aircraft Ground Refueling. FEs, who have completed proper training, documented in their training folders and certified on the squadron's letter of X's, are authorized to refuel the aircraft. The FE will comply with T.O. 00-25-172 and T.O. 1E-8C-2-7.

4.1.8.1. In the event off station support is limited or nonexistent, other crewmembers will be used as refueling team members at the discretion of the AC and under the direction of the FE. The FE will brief all team members on use of fire equipment, safety precautions and emergency procedures per existing tech orders.

4.1.8.2. Abnormal Refueling. An abnormal condition will exist when adequate portable fire fighting equipment is unavailable and/or any condition(s) listed under abnormal condition, Section 1, T.O. 00-25-172 exist(s). A standby fire truck will be in position prior to servicing.

4.1.9. Aircraft Interior Lighting. During night parking, do not use the high level flight deck lighting until after the aircraft is chocked and brakes are released, so pilots can ensure the aircraft does not roll.

4.1.10. Three-Engine Ferry Flights. Three engine ferry flights will not be conducted unless specifically approved by applicable MAJCOM/DO. Required crew qualifications will be determined by OG/CC or equivalent.

4.2. Communications. All flight crew will monitor primary ATC radio during departure and arrival. Guard frequency will be monitored by either pilot at all times. At least one flight crewmember will monitor mission crew interphone at all times.

4.2.1. Pilots should not monitor command post frequency or mission crew interphone during takeoff or landing. Radio calls or PA announcements will not be initiated until safely airborne; except in an emergency.

4.2.1.1. During air refueling; as a minimum, the pilots will monitor A/R primary frequency and flight crew interphone.

4.2.2. NAV/DSO will be primary on command post frequency throughout the mission unless otherwise briefed.

4.2.2.1. During air refueling; as a minimum, the NAV/DSO and FE will monitor A/R primary, ATC, flight crew and mission crew interphone.

4.2.3. The NAV/DSO and FE will monitor mission crew interphone for the pilots during takeoff and landing.

4.3. Taxi. Taxi speed in the parking area or any congested area will be slow enough to accommodate a wing walker. Minimum taxiway width is 75 feet, unless waived by the OG/CC or equivalent.

4.3.1. If a SOF (Supervisor of Flying) is available, a last chance inspection will be conducted.

4.3.2. If heavy precipitation and/or possible thunderstorms are anticipated on departure, the pilots and NAV/DSO will use the weather radar to scan the departure path prior to takeoff to avoid flight into hazardous weather conditions.

4.4. Takeoff and Landing Data. All initial takeoff and landing data will be computed/reviewed during mission planning by a FE. Prior to flight, the AC or FP/CP will check the takeoff and emergency return data.

4.4.1. Reduced Thrust. Takeoffs may be accomplished on a wet runway provided the runway surface is free of snow, ice and slush. Reduced thrust takeoffs are permitted with falling precipitation provided precipitation is not moderate to heavy and there is no standing water.

4.4.2. Minimum VREF. VREF will be no less than 120 KIAS for all approaches.

4.5. Takeoff and Landing Restrictions. The minimum runway length for normal operations is 9000 feet by 135 feet width, unless waived by the OG/CC or equivalent. For weather divers or other unusual circumstances, the minimum runway length is 7,000 feet by 135 feet in width.

4.5.1. Rolling takeoffs should be made whenever critical field length permits. Aircraft will normally takeoff and land on the longest available runway.

4.5.2. Tailwind. Takeoffs and landings with a tailwind are not recommended. If operational necessity or ATC considerations dictate, a tailwind takeoff or landing may be accepted IAW T.O. 1E-8C-1-1 restrictions and procedures.

4.5.3. RCR. Aircraft will not takeoff or land when reported RCR is less than 10. The OG/CC or equivalent has the authority to waive the minimum RCR to 7 when operational necessity warrants. Some airports may report the average RCR value, which in this case the pilot will ask for the minimum RCR recorded on the runway. Aircraft ground operations (taxi or towing) will not be conducted by aircrews with RCR less than 7.

4.5.4. Crosswind Restrictions. Unless further restricted by aircraft gross weight or emergency conditions, the following apply:

4.5.4.1. Maximum crosswind component (gust included) for takeoff or landing on a dry runway is 25 knots.

4.5.4.2. Takeoff maximum crosswind on a wet runway is 20 knots.

4.5.4.3. Landing maximum crosswind on wet runway is IAW T.O. 1E-8C-1-1.

4.5.5. Maximum Landing Gross Weight. Landing gross weight will not exceed 247,000 pounds. If mission requirements dictate, the OG/CC or equivalent may authorize landings over 247,000 pounds, provided all other landing requirements can be safely met.

4.5.6. All landings will be flown so as to touchdown in the designated touchdown zone (1000-2000 feet). If it appears that the actual touchdown will occur beyond the first 1/3 or 3,000 feet (whichever is less) of the landing runway, a go-around will be initiated.

4.5.7. Normal full stop landings with less than 40 degrees of flaps are prohibited.

4.5.8. After landing checklists will not be initiated until clear of the runway unless unique circumstances dictate (i.e., engines need to be shutdown prior to leaving the runway for FOD prevention).

4.5.9. Multiple Full Stop Landings. The FE will determine the brake energy used during landing and then using the decision speed (V1), without headwind correction, determine the brake energy for an abort during a subsequent takeoff. Do not takeoff until the combined energy after ground cooling

is less than 28 million ft-lbs. If takeoff is made with brake energy above 10 million ft-lbs., air cooling procedures will be followed.

4.6. Occupancy of Flight Crew Duty Positions:

4.6.1. The highest qualified pilot will accomplish the takeoff and landing when a distinguished visitor (Code 4, Code 4 equivalent, or higher) is on board. A qualified AC will make the takeoff and landing from the left seat. Instructor pilots may takeoff or land in either seat with the above condition.

4.6.2. The pilot in command (PIC), will be in the seat during all critical phases of flight. This does not preclude a seat swap with another AC or IP as long as the flight orders reflect the appropriate change for the designated pilot in command.

4.6.3. A qualified AC or FP may perform duties in either seat. Individuals possessing only CP qualifications will not perform duties in the left seat during critical phases of flight unless under IP/SEFE supervision. Senior officers will fly IAW AFI 11-2E-8V1 restrictions.

4.6.4. During flight, if either pilot leaves the flight deck, the flight engineer position must be occupied by a qualified FE or an unqualified FE supervised by an instructor FE, IP or SEFE.

4.6.5. Personnel who are not qualified or not in training will not occupy any flight crew duty position during critical phases of flight or simulated/actual emergencies unless properly supervised.

4.6.6. All flight deck seats should be manned below 10,000 feet MSL. An observer, if available, will be on headset and will actively scan for traffic.

4.7. Navigation. The E-8 is Area Navigation (RNAV) certified. The NAV/DSO will normally plan for maximum use of E-8 navigation equipment by flying great circle routes. Random RNAV/direct routing may be flown according to FLIP General Planning [Chapter 4](#)). The NAV/DSO will annotate all in-flight clearances and revise ETA's, if required.

4.7.1. To ensure position accuracy, a position check of the navigation equipment will be made as soon as practical after initial level off, prior to initiating an air refueling rendezvous, and when assuming and departing station. The NAV/DSO will evaluate Integrated Navigation (INAV) solutions and advise the pilots if a change of the selected steering solution is warranted. In the event of GPS meaconing or jamming, the GPS will be verified by using other means such as radio aids or INS position.

4.7.2. Position checks are required and will not exceed 1 hour unless flying safety dictates (thunderstorm avoidance, aircraft emergency, etc.). Information will be evaluated and when necessary, discrepancies will be noted and coordinated.

4.7.3. A heading check will be made on all missions, as soon as practical after level-off. This heading check will consist of comparing headings of all independent and repeater heading sources (INS, BDHIs, HSI, RMDIs and "whiskey" compass).

4.7.3.1. All position and heading checks will be annotated on the navigator's log.

4.7.4. Prior to altering INAV solution, the NAV/DSO will notify the pilot and MCC. Changing INAV solutions could affect autopilot steering commands and mission radar picture.

4.8. On-Station Procedures:

4.8.1. All orbit location changes will be coordinated by the AC, NAV/DSO and MCC.

4.8.2. The NAV/DSO is responsible for HVAA net coordination.

4.8.3. The NAV/DSO responsibilities include: All self defense functions of the aircraft to include monitoring data links/onboard sensors for situation awareness, and EMCON of PME.

4.8.4. In the event of a threat retrograde, the NAV/DSO will provide a safe heading and coordinate with the MCC and AC to determine whether to activate radar EMCON options.

4.9. Air Refueling Restrictions:

4.9.1. Pilots unqualified in air refueling may conduct air refueling activity from either the pilot or copilot position while under IP/SEFE supervision.

4.9.2. CPs are authorized to fly the aircraft up to and including pre-contact with any refueling qualified pilot in the left seat. Copilots may conduct air refueling under IP/SEFE supervision or with any air refueling qualified AC (SQ/CC approved and annotated on the squadron's letter X's).

4.9.3. Manual Boom Latching or Tanker Manual Operation without tanker disconnect capability will not be accomplished unless an actual fuel emergency exists or approved by the OG/CC or equivalent.

4.9.4. Once air refueling is complete and the pre-contact position has been reestablished, the receiver pilot will reduce power to achieve lateral separation and 1000 feet vertical separation while avoiding under-running the tanker.

4.9.4.1. If the receiver cannot descend to establish the required vertical separation, the receiver will move back to the pre-contact position and request the tanker initiate a climb to obtain a minimum of 1,000 feet vertical separation.

4.9.4.2. No turns from air refueling track will be made or checklists initiated until a 1,000 feet vertical separation between the receiver and the tanker has been established.

4.10. Arrival and Approach. The pilot flying the approach will brief the crew in accordance with the T.O. 1E-8C-1 and AFM 11-217 requirements. Four complete sets of the appropriate Terminal Approach Procedures and Standard Arrival Route (STAR) booklets will be in the aircraft to be used by the pilots, NAV/DSO, and FE. The flight crew will monitor the approach, flight instruments and advise the pilot making the approach of any deviation from the prescribed procedures and the following advisory calls.

4.10.1. During nonprecision approaches, the pilot not flying the approach will call out:

4.10.1.1. "100 feet above MDA" (minimum descent altitude).

4.10.1.2. "MDA" upon reaching MDA.

4.10.1.3. "Runway in sight." This may be called anytime during the approach. Use caution when obstructions to vision such as fog, haze, low clouds, etc., are present.

4.10.1.4. "VDP" at Visual Decision Point.

4.10.1.5. "Missed Approach Point," if applicable.

4.10.2. For precision approaches, the pilot not flying the approach will make the following advisory calls:

4.10.2.1. "100 feet above decision height" (DH).

4.10.2.2. "Runway in sight." This may be called anytime during the approach. Use caution when obstructions to vision such as fog, haze, low clouds, etc., are present.

4.10.2.3. "Decision height."

4.10.3. The pilot flying the approach will acknowledge all advisory calls and announce intentions at the appropriate points for both instrument and visual approaches (e.g. continuing, initiating go-around, or landing).

4.10.4. Planned missed approaches during a precision approach will be initiated no lower than DH or 200 feet AGL, whichever is higher. During nonprecision approaches, planned missed approach will be initiated no lower than 200 feet AGL. Planned 4-engine go-arounds from VFR approaches/patterns will be initiated no lower than 50 feet AGL.

4.11. Transition Training. Transition is defined as any approach or landing other than one to a full stop.

4.11.1. SQ/DO or equivalent will be advised before accomplishing unscheduled transition.

4.11.1.1. Seat swaps during transition will be made on the downwind leg of either the IFR or VFR traffic pattern. Crews should consider extending the downwind leg of a VFR pattern to afford more time to complete crew movement.

4.11.2. Pattern Procedures:

4.11.2.1. Unless specific aircraft restrictions prohibit, E-8 aircraft will fly instrument patterns at a minimum of 200 KIAS to aid in controller sequencing, but in no case less than in-flight minimum maneuvering speed. E-8 aircraft will fly VFR patterns at no less than in-flight maneuvering speed.

4.12. Touch and Go Restrictions:

4.12.1. Current and qualified IPs and ACs (ACs meeting "experienced criteria IAW 11-2E-8V1 and qualification criteria in AFI 11-2E-8V2; SQ/CC approved and annotated on the squadron's letter of X's) may perform touch and go landings IAW T.O. 1E-8C-1 and under the following conditions:

4.12.1.1. No passengers may be on board. The following individuals are not considered passengers for this restriction: Wing supervisors, all E-8 maintenance/CSS personnel (military or contractor), all AFA/AFROTC cadets, FAA/ATC personnel, air weapons controllers flying under the provisions of AFI 11-401 and MAJCOM supplement.

4.12.1.2. 9,000 x 135 or minimum runway length and width required to permit a safe, normal, full-stop landing, whichever is higher.

4.12.1.3. Maximum crosswind - 15 knots (IP) or 10 knots (AC).

4.12.1.4. Flaps no less than 14 (IP only, ACs restricted to flaps 40 or 50).

4.12.1.5. Wet runway or minimum RCR of 10; if precipitation is not moderate or heavy.

4.12.1.6. No RSC - runway must be free of snow, ice, slush and standing water.

4.13. Emergency Procedures:

4.13.1. In the event of an emergency, the AC/IP will assume the aircraft controls, fly the airplane until the situation is stabilized, and accomplish the final approach and landing unless the situation prevents/dictates otherwise.

4.13.2. In an emergency, all student training and simulated emergency procedures practice will be terminated. Training will resume only when the AC/IP has determined that no hazard to safe aircraft operation exists.

4.13.3. Fuel Dumping. Fuel dumping will be conducted only to reduce gross weight in an emergency or for operational necessity. When circumstances permit, dump fuel above 5,000 feet AGL over unpopulated areas or in designated fuel dump areas. Advise the appropriate air traffic control agency of intentions, altitude, location, when beginning fuel dumping and when the operation has been completed. Make the appropriate entry on the AFTO Form 781.

4.13.4. In-flight Engine Failure. If an engine is shutdown in flight, the mission will be terminated and a landing made at the nearest suitable airfield.

4.13.5. In-flight Troubleshooting. Aircrews will not conduct in-flight troubleshooting after flight manual emergency procedures are completed. Once a malfunctioning system is isolated, that system should not be used again unless essential for recovery.

4.14. Simulated Emergency Procedures. Simulated emergency procedures are normally considered those procedures where the normal configuration of the airplane is altered (i.e., an engine pulled to idle to simulate the loss of an engine).

4.14.1. Prohibited Simulated Emergencies:

4.14.1.1. Engine failure takeoff continued on the runway.

4.14.1.2. Two-engine operations (two engines at idle); however, two engine procedures may be practiced, e.g., only one engine at idle.

4.14.1.3. Three-engine rudder boost-out operations (one engine at idle and rudder boost off); however, three engine rudder boost out procedures may be practiced, e.g., one engine at idle and rudder boost on.

4.14.1.4. Actual engine shutdown, except during actual functional check flights (FCF).

4.14.2. The AC will alert all crewmembers prior to initiating simulated emergency procedures. All aircraft systems will be restored to normal operation prior to landing, except for simulated engine-out landings.

4.14.3. Engine-out limitations (Simulated). Current and qualified IPs and ACs are authorized to perform three engine approaches, landings (IP - 3-engine touch/4-engine go; AC - 3-engine full-stop landings) and missed approaches with the following restrictions:

4.14.3.1. Gross weight of 247,000 lbs or less.

4.14.3.2. During a simulated engine-out approach, if an unplanned go-around or missed approach is required, symmetrical thrust on all four engines will be used as soon as practical. However, planned practice 3-engine missed approaches are permitted, but will be initiated no lower than DH (if applicable) or 200 feet AGL, whichever is higher.

4.14.4. Simulated Engine Failure Takeoff Continued (SEFTOC) (IP Required). Simulated engine failure during takeoff and climbout will not be initiated until 400 feet AGL.

4.14.5. Simulated Engine-Out Touch-and-Go Landings (IP Required). IPs are permitted to perform/supervise simulated engine-out touch-and-go landings using the same restrictions outlined in

paragraph 4.12. Touch and go procedures are IAW T.O. 1E-8C-1, keeping in mind the approach and touch down are planned using three engines until setting the throttles to the vertical position at which time all four engines/throttles will be used for the remainder of the takeoff and climbout.

4.14.6. Practice Approach to Stall Recovery (IP Required). This is normally a simulator-only maneuver; however, if a simulator is unavailable or inadequate, the OG/CC or equivalent may authorize it to be accomplished in flight. A thorough briefing and review of section 6 of the T.O. 1E-8C-1 will be conducted during mission planning.

4.14.6.1. In addition to T.O. 1E-8C-1 limitations, the following restrictions apply:

4.14.6.1.1. Stick shaker warning system must be operating.

4.14.6.1.2. Speed is no slower than charted stick shaker speed.

4.14.6.1.3. 250,000 pounds or less gross weight.

4.14.6.1.4. Day VMC.

4.14.6.1.5. Performed at an altitude that allows for recovery of at least 5,000 feet above clouds and 10,000 feet above the terrain. The maneuver will not be flown at any time over heavily populated areas.

4.14.6.1.6. Do not demonstrate or practice complete stalls.

4.14.6.1.7. Initiate recovery no later than first indication of stick shaker or initial buffet.

4.14.6.1.8. No passengers on board.

4.15. Formation Restrictions. The enroute cell and air refueling formations described in T.O. 1-1C-1-38 are the only formations authorized and will be flown only when specifically tasked. Planned enroute cell formations will be thoroughly briefed using the formation briefing guide as a minimum ([Attachment 3](#)).

4.16. In-flight Maneuvers:

4.16.1. Unusual Attitude Recoveries (IP Required). The purpose of demonstrating unusual attitudes is to teach pilots to properly recognize, confirm and recover from unusual aircraft attitudes. To perform the maneuver, the pilot or IP will:

4.16.1.1. Inform the entire crew via a PA announcement that "we will be conducting unusual attitude recoveries."

4.16.1.2. Compute an MCT power setting prior to initiating all unusual attitudes.

4.16.1.3. Have the pilot close his/her eyes to create a realistic environment.

4.16.1.4. Fly the aircraft into a nose-high or nose-low attitude commensurate with altitude and aircraft performance restrictions.

4.16.1.5. Once the appropriate aircraft attitude is established, announce to the pilot "you have the aircraft." At which time the pilot will:

4.16.1.5.1. Recognize the unusual attitude.

4.16.1.5.2. Confirm the unusual attitude with other attitude references.

4.16.1.5.3. Recover using T.O. 1E-8C-1 procedures.

4.16.1.6. For the purpose of the demonstration, recovery from unusual attitudes is complete when the aircraft is in level flight and at a stable airspeed (approximately 250 KIAS).

4.16.1.7. Restrictions to performing unusual attitude recoveries are as follows:

4.16.1.7.1. IP supervision is required. IP must be at a set of flight controls.

4.16.1.7.2. Unusual attitudes will be initiated and completed above 10,000 ft AGL.

4.16.1.7.3. Aircraft must maintain VMC throughout the maneuver.

4.16.1.7.4. Unusual attitudes will be performed during the day only.

4.16.1.7.5. Bank angle will not exceed 30 degrees.

4.16.1.7.6. Pitch attitude will not exceed 15 degrees nose high or low.

4.16.2. Air Refueling Limits Demonstration (IP Required). The purpose of the demonstration is to show the maximum size of the boom envelope and how to maneuver inside the envelope. The pilot will:

4.16.2.1. Confirm positive disconnect capability.

4.16.2.2. Inform the boom operator that you will be performing a limits demonstration.

4.16.2.3. Fly the aircraft into the contact position.

4.16.2.4. Inform the boom operator of the direction of planned movement and numerical limit desired (i.e., "I'd like to come 8 right.").

4.16.2.5. Maneuver the aircraft smoothly and controlled to the requested limit.

4.16.2.6. Hold that position to demonstrate the visual references, then return to the center position.

4.16.2.7. Restrictions to performing air refueling limits demonstration are as follows:

4.16.2.7.1. IP supervision is required. IP must be at a set of flight controls.

4.16.2.7.2. Must have positive boom disconnect capability.

4.16.2.7.3. Limit movement in the envelope as follows:

Left and right--8 degrees;

Up and down--22 and 38 degrees elevation respectively;

In and out--8 and 16 feet boom extension respectively.

4.16.3. Landing Attitude Demonstration (IP Required). The purpose of the demonstration is to show the proper landing attitude, required control inputs and visual references during landing. The examinee, IP student or IP will:

4.16.3.1. Inform the SOF of intentions.

4.16.3.2. Use normal approach/pattern and landing procedures (4 engine only).

4.16.3.3. Fly the aircraft to the proper landing attitude.

4.16.3.4. Use power to maintain the landing attitude just above the runway.

4.16.3.5. Initiate go around procedures IAW T.O. 1E-8C-1 at no less than 3000 ft remaining. Pilots should consider ground roll distance when performing this maneuver.

4.16.3.6. Restrictions to landing attitude demonstrations are as follows:

4.16.3.6.1. IP supervision is required. IP must be at a set of flight controls.

4.16.3.6.2. Normal touch and go restrictions apply.

4.16.4. Retrograde Operations (Simulated). The purpose of conducting retrograde operations is to instruct or practice aircraft survival techniques and procedures in a simulated high threat environment. A thorough briefing and review of retrograde procedures will be conducted during mission planning. The AC will:

4.16.4.1. Inform the entire crew via a PA announcement that "we will be conducting simulated retrograde procedures."

4.16.4.2. Restrictions to performing simulated retrograde operations:

4.16.4.2.1. All equipment power-off procedures will be simulated.

4.16.4.2.2. Simulated PHASE III retrogrades will be accomplished in-flight when possible unless restricted by ATC airspace clearance with the following restrictions:

4.16.4.2.3. Do not exceed 4,000 ft VVI.

4.16.4.2.4. Initiate final level off NLT 10,000 feet AGL.

Chapter 5

MISSION CREW OPERATING PROCEDURES

5.1. General. This Chapter details duties, responsibilities and operating procedures applicable to the mission crew only.

5.2. E-8 Task Description. The E-8 provides a battle management capability to the theater and subordinate commanders. It is capable of wide and small area surveillance, target and situation development, target acquisition, analysis, attack planning, attack support and combat assessment.

5.3. E-8 Mission Crew. The onboard joint mission crew is comprised of Command, Intelligence, Self Defense, Operations and System Management sections.

5.3.1. Minimum Mission Crew. The minimum crew required to fly a combat/mission sortie will be determined by the MCC and AC with SQ/DO approval. In no case; however, will the number drop below those outlined in [Chapter 3](#) of this volume.

5.4. Command Section. The command section is comprised of the mission crew commander and deputy mission crew commander (DMCC).

5.4.1. Mission Crew Commander (MCC):

5.4.1.1. Responsibilities. The MCC is responsible to the appropriate commander for the E-8 mission. The MCC performs/supervises battle management functions; and manages the performance of all mission crew sections required to accomplish the mission. The MCC will have full access to all aspects of the E-8 mission. The MCC is responsible for coordinating activities before, during and after sorties; and is the final authority for all mission decisions, except those made by the AC in the interest of flight safety.

5.4.1.2. Procedures. The MCC will ensure crew management in accordance with this volume. The following procedures will apply.

5.4.1.2.1. Coordinate with the AC on mission planning and mission execution requirements.

5.4.1.2.2. Direct, conduct and supervise mission planning and mission execution.

5.4.1.2.3. Coordinate the preparation of required mission equipment, data and displays prior to takeoff to ensure the mission crew is prepared to meet mission tasking.

5.4.1.2.4. Coordinate system initialization and checkout and determine PME status.

5.4.1.2.5. Manage the orderly transfer of data base information and station responsibility, if required.

5.4.1.2.6. Declare on-station and/or operations normal to command agencies after evaluating status of aircrew and aircraft to assume duties.

5.4.1.2.7. Advise the AC of situations which could affect safety of flight operations or mission accomplishment.

5.4.1.2.8. Coordinate with the AC for defensive actions required as a result of threat information received from the intelligence/self defense section.

5.4.1.2.9. Direct and implement mission changes as required and ensure command agencies are advised of mission status.

5.4.1.2.10. Advise aircrew of changes in alert states, command objectives, ROE implementation or priority of effort.

5.4.1.2.11. Coordinate with the AC on continued operations of malfunctioning mission equipment, or unscheduled downtime that could affect the mission; carefully evaluate the potential loss of equipment against the potential inability to accomplish the mission.

5.4.1.2.12. Direct and coordinate classified emergency destruction as required.

5.4.1.2.13. Direct emergency procedures among the mission crew and coordinate with the AC.

5.4.1.2.14. Compile mission logs, lessons learned, mission summary and other relevant data for mission debrief/MISREP.

5.4.1.2.15. Upon mission completion, ensure all classified materials are accounted for and/or properly stored.

5.4.2. Deputy Mission Crew Commander (DMCC):

5.4.2.1. Responsibilities. This position is normally manned by US Army personnel. The DMCC is the designated ground commander's mission representative and is responsible for ensuring surveillance, targeting and attack control priorities are met. The DMCC coordinates with the MCC for mission completion.

5.4.2.2. Procedures. The DMCC will ensure the ground commander's objectives are fulfilled in accordance with the following procedures.

5.4.2.2.1. Ensure supported Ground Station Modules (GSMs) are notified of on-station time and equipment status.

5.4.2.2.2. Notify GSMs of adjustments to operations when the E-8 is partially mission capable.

5.4.2.2.3. Ensure off-station time and mission events are debriefed and passed to supported ground commanders/GSMs.

5.4.2.2.4. Ensure (voice/data) communications are established with supported GSMs.

5.4.2.2.5. Acquire/monitor GSM equipment and communications status; advise the MCC as required.

5.4.2.2.6. Monitor Airborne Target Surveillance Supervisor (ATSS) mission accomplishment.

5.4.2.2.7. Resolve competing requirements based upon mission priorities or recommend solutions through the MCC.

5.4.2.2.8. Maintain current and accurate battlefield situation information.

5.4.2.2.9. Ensure supported ground commanders are informed of E-8 status/on station time.

5.4.2.2.10. Monitor ongoing mission activity; maintain situational awareness of other E-8 sections; and coordinate mission changes as directed/required.

5.4.2.2.11. Coordinate supported ground commander's requirements and changes to mission priorities.

5.4.2.2.12. Take over MCC responsibilities in absence of MCC.

5.5. Intelligence Section. The Intelligence section is responsible for collecting, fusing, analyzing and disseminating mission related intelligence to the E-8 crew. The intelligence section is comprised of the airborne intelligence officer (AIO) and/or the airborne intelligence technician (AIT).

5.5.1. Airborne Intelligence Officer/Technician (AIO/T):

5.5.1.1. Responsibilities. The AIO/T will monitor and analyze near-real-time all source intelligence reports/systems to provide current Order of Battle (OB) data, threat assessments and targeting information. The AIO/T ensures the crew is updated on the latest available intelligence reports and information affecting the mission. They will coordinate sensor cross-cueing requests with other agencies/collectors to support mission requirements. The AIO/T is responsible to the MCC for providing full access to all aspects of the mission.

5.5.1.2. Procedures. The AIO/T will ensure that management and operation of the intelligence section is in accordance with this volume.

5.5.1.2.1. Maintain external communication nets to include: Voice Product Net/Special Intel Systems and intelligence collection platforms/agencies, etc. Coordinate with intelligence collection agencies to ensure the development of a composite intelligence situation picture.

5.5.1.2.2. Analyze incoming intelligence reports/information to determine impact on platform operations and mission; coordinate with command, operations and self-defense sections.

5.5.1.2.3. Verify and update OB database; analyze and brief appropriate crewmembers to support mission requirements.

5.5.1.2.4. Coordinate with MCC and NAV/DSO on threat assessment for the E-8; and provide AOR threat assessments to support mission operations.

5.5.1.2.5. Correlate sensor data with validated intelligence reports to develop and identify targets for surveillance, tracking and/or attack nomination.

5.5.1.2.6. Configure and operate the Constant Source system.

5.5.1.2.7. Correlate all-source intelligence reports with in-flight reports to perform initial limited combat assessment; support the battle damage assessment (BDA) process.

5.5.1.2.8. Be familiar with OPLANS, OPORDS, ATO, air interdiction targeting list, ROE, restrictive and permissive fire measures, intelligence preparation of the battlefield (IPB), priority of fires, and scheme of maneuver.

5.5.1.2.9. Nominate targets for attack which meet the appropriate mission requirements based on various guidelines: Air Interdiction Target Plan, Army's Priority of Fire List, ROE, Restrictive/Permissive Fire Measures and Scheme of Maneuver.

5.5.1.2.10. Coordinate surveillance requests from other intelligence agencies/collectors with MCC/DMCC.

5.5.1.2.11. Manage cross-cueing requests with off-board intelligence agencies and collectors. Coordinate with MCC/DMCC if further cross-cueing for target validation prior to target nomination is required.

5.5.1.2.12. Analyze sensor information.

5.5.1.2.13. Recommend target prioritization based upon available resources and impact on enemy operations/capabilities.

5.5.1.2.14. Coordinate with mission crew on probable targets and possible lines of communication.

5.5.1.2.15. Coordinate destruction of classified material.

5.5.1.2.16. Assist the mission crew in Spectrum Interference Reporting (SIR) analysis.

5.6. Self-Defense Section. Self-defense duties of the E-8 aircraft will be performed by the NAV/DSO. The NAV/DSO will coordinate extensively with the AC, MCC and AIO/T to ensure overall defense of the aircraft.

5.6.1. Self-defense Procedures. Reference paragraph 4.8. for NAV/DSO on-station procedures.

5.7. Operations Section. This section is responsible for the planning and execution of surveillance, attack support and command and control functions in an assigned area of responsibility. The following crew positions comprise the operations section: senior director (SD), sensor management officer (SMO), senior director technician (SDT), air weapons officer (AWO), air operations technician (AOT) and airborne target surveillance supervisor (ATSS).

5.7.1. Senior Director (SD):

5.7.1.1. Responsibilities. The SD is responsible to the MCC for the overall supervision and management of the operations section. The SD determines surveillance, command and control and attack support objectives; then creates and implements the operational strategy to meet mission objectives. The SD performs battle management functions within the AOR to include: planning, procuring, allocating, tasking and monitoring combat assets. The SD is responsible for briefing the section on specific duties for each flight. The SD ensures E-8 communication, datalink and radar systems support operational tasks.

5.7.1.2. Procedures. The SD will ensure management of the operations section is in accordance with this volume.

5.7.1.2.1. Monitor and assess current air and ground situation to ensure planned operations are attainable and compatible with the tactical situation. Analyze situations that may impact operations; develop/change operational strategy as required.

5.7.1.2.2. Ensure that any changes to mission taskings are fully coordinated with the MCC and all affected C2 agencies.

5.7.1.2.3. Understand and comply with appropriate theater mission documents (ATO, ACO, OPLANS, OPORDS, SPINS, etc.).

5.7.1.2.4. Coordinate with SMO to ensure effective radar employment and timeline management.

5.7.1.2.5. Synchronize and orchestrate execution of surveillance, attack support and other taskings.

5.7.1.2.6. Develop and ensure an effective communication plan with communications system technician (CST).

5.7.1.2.7. Coordinate with the intelligence section for cross-cueing information, threat update; target identification, development and nomination.

5.7.1.2.8. Coordinate with other C2 elements to ensure deconfliction and synchronization of combat assets.

5.7.1.2.9. Ensure threat assessment and warning is provided to assigned combat assets; as well as other information pertaining to mission execution (weather, airfield status, etc.).

5.7.1.2.10. Monitor in-flight emergencies and search and rescue efforts; offer assistance to applicable agencies/assets as required/able.

5.7.2. Sensor Management Officer (SMO). The SMO assists the SD in the supervision and management of the operations section.

5.7.2.1. Responsibilities. The SMO is responsible for the employment of the E-8 sensors; monitors system performance and provides for the accurate collection, display and dissemination of sensor data. The SMO is the radar timeline manager; analyzes Electronic Attack (EA) plans, implements Electronic Protection (EP) measures and monitors JTIDS link operations.

5.7.2.2. Procedures. The SMO will ensure sensor, data link and operations section management is in accordance with this volume.

5.7.2.2.1. Coordinate with the SD to assist in operations section management.

5.7.2.2.2. Ensure E-8 orbit supports mission tasking; coordinate with mission crew to optimize orbit.

5.7.2.2.3. Coordinate with the airborne mission system specialist (AMSS) on radar system status and with the CST on JTIDS system status. Ensure JTIDS link meets mission requirements. Notify mission crew of system capability and/or limitations.

5.7.2.2.4. Relay significant sensor anomalies (system, weather, screening) to mission crew.

5.7.2.2.5. Conduct effective radar timeline management; ensure RSR approval process supports mission priorities, taskings and changes. Assist the mission crew with optimal radar system utilization.

5.7.2.2.6. Coordinate with the ATSS on GSM requirements.

5.7.2.2.7. Notify the mission crew when electronic attack (EA) is experienced and coordinate actions for electronic protect (EP). Forward all reports to appropriate agencies and coordinate with intelligence section for MIJI analysis.

5.7.3. Senior Director Technician (SDT):

5.7.3.1. Responsibilities. The SDT evaluates taskings and develops surveillance strategy to accomplish mission objectives. The SDT performs battle management functions and assists in the management and supervision of the operations section as directed by the SD.

5.7.3.2. Procedures. The SDT will ensure the operations section management/activities are in accordance with the following procedures.

- 5.7.3.2.1. Utilize external communications to coordinate taskings and gather operational information from other command, control, communications and intelligence elements.
- 5.7.3.2.2. Direct the accurate collection, display and dissemination of sensor data.
- 5.7.3.2.3. Ensure assignment of tracking responsibilities and ensure tracking continuity in assigned AOR.
- 5.7.3.2.4. Understand and comply with appropriate theater mission documents (ATO, ACO, OPLANS, OPORDS, etc.).
- 5.7.3.2.5. Monitor/update operation section taskings and other pertinent information utilizing internal communications; disseminate individual taskings as appropriate.
- 5.7.3.2.6. Analyze the operational situation and advise the SD of the section capabilities/limitations.
- 5.7.3.2.7. Maintain situational awareness of OB; ensure optimum methods for target detection (e.g. route screening, history replay, RSR selection and cross-cueing from other sources) are utilized.
- 5.7.3.2.8. Maintain AOT currency requirements.
- 5.7.3.2.9. Supervise the on-the-job training (OJT) for AOTs; including the current surveillance functions of detection, tracking, reporting and recording.
- 5.7.3.2.10. Assist with the management and supervision of the operations section as directed by the SD.

5.7.4. Air Weapons Officer (AWO):

5.7.4.1. Responsibilities. The AWO is responsible for executing surveillance, command and control and attack support functions within the AOR. The AWO is the primary coordinator between the E-8 and attack aircraft/assets; providing near-real-time target information and threat updates.

5.7.4.2. Procedures. The AWO will ensure execution of mission objectives in accordance with the following procedures.

- 5.7.4.2.1. Use sensor data to detect, track and classify targets; coordinate with intelligence section to identify and develop targets.
- 5.7.4.2.2. Relay accurate, concise target briefs to attack assets.
- 5.7.4.2.3. Ensure procedural deconfliction and safety of all assigned assets.
- 5.7.4.2.4. Establish and maintain voice contact with assigned agencies/assets.
- 5.7.4.2.5. Notify assigned assets of air/ground situation: friendly/enemy troop locations, target updates, threat warning.
- 5.7.4.2.6. Task assets against approved targets utilizing advisory control procedures in accordance with AFI 11-214. Change/divert missions as dictated by the tactical situation with approval.

5.7.4.2.7. Conduct efficient and safe transfer of assigned assets to other C2 agencies.

5.7.5. Air Operations Technician (AOT):

5.7.5.1. Responsibilities. The AOT is responsible for executing surveillance functions. These responsibilities include detection, tracking, monitoring, track classification, reporting and target development within the assigned AOR.

5.7.5.2. Procedures. The AOT will execute surveillance functions in accordance with the following procedures.

5.7.5.2.1. Collect, display and disseminate surveillance data.

5.7.5.2.2. Utilize sensor data to detect, track and classify moving and fixed enemy targets; coordinate with intelligence section and external agencies for identification.

5.7.5.2.3. Conduct target development.

5.7.5.2.4. Maintain situational awareness of air and ground environment: friendly/enemy troop location, target updates, threat warning.

5.7.6. Airborne Target Surveillance Supervisor (ATSS):

5.7.6.1. Responsibilities. Position manned by US Army personnel. The ATSS is responsible for managing the Army requirements for radar allocation and collection priorities. The ATSS is the primary coordinator between the E-8 and GSMs; and is responsible for ensuring ground objectives are fulfilled. The ATSS coordinates with the DMCC and SMO to prioritize and implement GSM and/or ground commander requests.

5.7.6.2. Procedures. The ATSS will manage Army land component in accordance with the following procedures.

5.7.6.2.1. Establish and maintain voice links and SCDL with supported GSMs and/or ground commanders.

5.7.6.2.2. Coordinate with the SMO, CST and GSMs for SCDL performance; ensure accuracy of SCDL parameters.

5.7.6.2.3. Provide mission status updates/changes to GSMs, inform of significant mission anomalies and notify when on/off station.

5.7.6.2.4. Debrief GSMs on accomplishment/failure of mission events.

5.7.6.2.5. Ensure GSMs and ground commanders requests are executed and army priorities and radar requirements are met. Coordinate with the DMCC and SMO in prioritizing and implementing ground requests.

5.7.6.2.6. Ensure SCDL is terminated or transferred.

5.8. System Management Section. The system management section is responsible to the MCC for the PME initialization, operation, configuration, monitoring and in-flight maintenance on the E-8 aircraft. This section is comprised of the airborne communications system technician (CST) and the airborne mission system specialist (AMSS). Onboard the aircraft, the AMSS' crew position is also referred to as the airborne radar technician (ART).

5.8.1. Airborne Communications System Technician (CST):

5.8.1.1. Responsibilities. The CST is responsible for the proper maintenance, configuration and operation of all internal and external communication equipment as well as navigation, self-defense and related avionics equipment.

5.8.1.1.1. Evaluate equipment status of communication, navigation and self-defense avionics equipment and advise the appropriate crewmember(s) (AC, MCC, NAV/DSO) of its capabilities and limitations.

5.8.1.1.2. Monitor, detect, isolate, document and correct malfunctions and respond to crew detected faults.

5.8.1.1.3. Responsible for Communications Plan of the Day (CPOD) implementation and updates.

5.8.1.1.4. Tune, configure, program and operate clear/secure voice communication radios and intercom nets.

5.8.1.1.5. Coordinate, configure, operate and monitor all communications data links for mission support.

5.8.1.1.6. Transmit mission and position reports, copy weather and clearances, initiate phone patches and provide general communications support.

5.8.1.1.7. Perform accounting, distribution and destruction of COMSEC materials. Ensure users are properly trained in the handling and use of the materials issued.

5.8.1.1.8. Ensure proper safeguarding of COMSEC material is provided during deployment.

5.8.1.1.9. Debrief maintenance crews on equipment performance and malfunctions.

5.8.1.1.10. Assist in ground maintenance activities while deployed; when required.

5.8.1.2. Procedures. The CST will ensure proper and timely configuration, programming and establishment of clear and secure voice communications, data links, anti-jam voice communications and intercom nets. The CST will also maintain all communications, navigation, self-defense and related avionics equipment.

5.8.2. Airborne Mission System Specialist (AMSS):

5.8.2.1. Responsibilities. The AMSS is responsible to the MCC for PME initiation, performance monitoring, maintenance and shutdown of the operations and control (O&C) subsystem, the radar system, and ancillary equipment and systems. The AMSS is responsible for the continuous operation, optimum configuration, system performance monitoring and in-flight maintenance of these systems. The AMSS will:

5.8.2.1.1. Coordinate with the software support unit ensuring software and mission specific databases are ordered, inventoried, loaded and secured according to prescribed directives.

5.8.2.1.2. Configure the RTMM disks and update disk data in-flight to support mission requirements.

5.8.2.1.3. Correlate system performance monitors, fault indications, built-in-test results and radar displays to ensure efficient and optimum performance of surveillance system, associated avionics and ancillary equipment.

5.8.2.1.4. Troubleshoot to the line replaceable unit (LRU), shop repairable unit (SRU) level and if available, repair equipment through module and part replacement to maintain minimum required mission capabilities.

5.8.2.1.5. During deployment or dispersed base operations, assist ground PME maintenance activities when required. When necessary perform organizational level maintenance on the PME systems using available spares and technical support.

Chapter 6

LOCAL PROCEDURES SUPPLEMENT

6.1. General. This supplement will be distributed to MAJCOM/NAF OPRs, as applicable. This supplement should not duplicate and will not be less restrictive than the provisions of this or any other publication without prior authorization from the appropriate MAJCOM/NAF OPR.

MARVIN R. ESMOND, Lt General, USAF
DCS/Air and Space Operations

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 11-2, *Aircraft Rules and Procedures*

AFPD 11-4, *Aviation Service*

AFI 11-202V3, *General Flight Rules*

AFI 11-214, *Aircrew and Weapons Director, and Terminal Attack Controller Procedures for Air Operations*

AFI 31-101, *The Air Force Physical Security Program*

AFI 33-360V1, *Publications Management Program*

AFI 37-160V8, *The Air Force Publications and Forms Management Program--Developing and Processing Forms*

AFMAN 11-217, *Instrument Flight Procedures*

ACCI 21-101, *Objective Wing Aircraft Maintenance*

T.O. 1-1C-1-38, *E-8 Air Refueling Procedures With KC-135 and KC-10*

T.O. 1E-38-1-1, *Flight Manual, USAF Series E8 Aircraft*

ACP 121, US Sup 2, *Communications Instructions, General-Air-Ground*

FAA Handbook 7610.4H, *Special Military Operations*

Abbreviations and Acronyms

AC—Aircraft Commander

ACO—Airspace Control Order

AFORMS—Air Force Operations Management System

AGL—Above Ground Level

AIO/T—Airborne Intelligence Officer/Technician

AMSS—Airborne Mission System Specialist

AOR—Area of Responsibility

AOT—Air Operations Technician

ARCT—Air Refueling Control Time

ATC—Air Traffic Control

ATO—Air Tasking Order

ATSS—Airborne Target Surveillance Supervisor

AWACS—Airborne Warning and Control System

AWO—Air Weapons Officer
BASH—Bird Aircraft Strike Hazard
BDA—Battle Damage Assessment
BDHI—Bearing Distance Heading Indicator
CAS—Close Air Support
CC—Commander
C2—Command and Control
COMSEC—Communications Security
CONUS—Continental United States
CP—Co-Pilot
CPO—Command Post
CPOD—Communications Plan of the Day
CSC—Central Security Control
CSS—Computer Systems Squadron
CST—Airborne Communications System Technician
DETCO—Detachment Commander
DH—Decision Height
DNIF—Duty Not Involving Flying
DMCC—Deputy Mission Crew Commander
DOD—Department of Defense
EA—Electronic Attack
EMCON—Emission Condition
EP—Electronic Protection
ERCC—Engine Running Crew Change
ETA—Estimated Time Arrival
FAA—Federal Aviation Administration
FCF—Functional Check Flight
FCIF—Flight Crew Information File
FOD—Foreign Object Damage
FLIP—Flight Information Publications
FE—Flight Engineer
FP—First Pilot

GPS—Global Positioning System
GSM—Ground Station Module
HSI—Horizontal Situation Indicator
HVAA—High Value Airborne Asset
IAW—In Accordance With
IFR—Instrument Flight Rules
INAV—Integrated Navigation
INS—Inertial Navigation System
IP—Instructor Pilot
IPB—Intelligence Preparation of the Battlefield
IQT—Initial Qualification Training
JTIDS—Joint Tactical Information Distribution System
JSAWS—Joint STARS Stand Alone Work Station
KIAS—Knots Indicated Airspeed
LPU—Life Preserver Unit
LRU—Line Replaceable Unit
MAJCOM—Major Command
MCC—Mission Crew Commander
MDA—Minimum Descent Altitude
MEL—Minimum Equipment Listing
MIJI—Meaconing, Intrusion, Jamming & Interference
MISREP—Mission Report
MPT—Mission Planning Team
MR—Mission Ready/Combat Mission Ready
MSL—Mean Sea Level
N/A—Not Applicable
NAF—Numbered Air Force
NATS—North Atlantic Track System
NAV/DSO—Navigator/Defense System Officer
NOTAM—Notice to Airman
NLT—No Later Than
NM—Nautical Miles

OB—Order of Battle
O&C—Operations and Control
OG—Operations Group
OGV—Operations Group Stan/Eval
OJT—On the Job Training
OPLAN—Operation Plan
OPORD—Operational Order
OPR—Office of Primary Responsibility
OPS—Operations
ORC—Operational Readiness Center
ORT—Operational Readiness Test
OWS—Operator Work Station
PA—Public Announcement
PAX—Passengers
PIC—Pilot in Command
PFPS—Portable Flight Planning Software
PME—Primary Mission Equipment
POB—People On-Board
POC—Point of Contact
P-Sortie—Pilot Proficiency Sortie
RAP—Ready Aircrew Program
RCR—Runway Condition Report
ROE—Rules of Engagement
RON—Remain Over Night
RMDI—Radio Magnetic Direction Indicator
RNAV—Area Navigation
RSR—Radar Support Request
RTMM—Removable Transportable Memory Modules
RVSM—Reduced Vertical Separation Minimums
SCDL—Surveillance Control Data Link
SD—Senior Director
SDT—Senior Director Technician

SE—Safety
SEFE—Standardization/Evaluation Flight Examiner
SEFTOC—Simulated Engine Failure Takeoff Continued
SID—Standard Instrument Departures
SIR—Spectrum Interference Reporting
SMO—Sensor Management Officer
SOF—Supervisor of Flying
SPINS—Special Instructions
SQ/CC—Squadron Commander
SQ/DO—Squadron Director of Operations
SRU—Shop Repairable Unit
STAR—Standard Terminal Arrival
TACAN—Tactical Air Navigation
TFT—Total Flying Time
TOLD—Takeoff and Landing Data
VFR—Visual Flight Rules
VMC—Visual Meteorological Conditions
VOR—VHF Omni-directional Range
VPN/SIS—Voice Product Network/Special Intel Systems
VREF—Reference Speed

Terms

Formation—Formation is defined as flights where two or more aircraft fly in close proximity (less than 3 NM) to one another and navigational responsibility rests with the lead aircraft in the formation. Standard air refueling operations are not considered formation.

Addresses

HQ AFSSA/XOF
1535 Command Dr, Suite D-309
Andrews AFB MD 20762-7002

HQ ACC/XOFR
205 Dodd Blvd, Suite 101
Langley AFB VA 23665-2789

Attachment 2**SAMPLE MISSION BRIEFING GUIDE CERTIFICATE****A2.1. Mission Administration:**

- A2.1.1. Date of flight/mission number
- A2.1.2. Call sign/tail number
- A2.1.3. Aircraft maintenance status
- A2.1.4. Aircraft commander/mission crew commander
- A2.1.5. Flight orders/FCIF

A2.2. Mission Timing:

- A2.2.1. Crew rest/report times
- A2.2.2. Takeoff
- A2.2.3. ARCT
- A2.2.4. On/Off station
- A2.2.5. Landing
- A2.2.6. Duty day restrictions

A2.3. Weather Forecast:

- A2.3.1. Takeoff
- A2.3.2. Enroute
- A2.3.3. Air Refueling
- A2.3.4. Orbit Area
- A2.3.5. Landing

A2.4. Mission Profile:

- A2.4.1. Jet routes/airways
- A2.4.2. Orbit location
- A2.4.3. HVAA/self-defense

A2.5. Mission Information:

- A2.5.1. Overview
- A2.5.2. Taskings
- A2.5.3. Activity Timeline
- A2.5.4. C² Units/Call signs

A2.5.5. Mission/aircrew objectives

A2.6. Alternate Mission Considerations:

A2.6.1. Go/No-Go Criteria

A2.6.2. Profile/mission changes

A2.7. Emergency Duties:

A2.7.1. Crew coordination

A2.7.2. Emergency/survival equipment

A2.7.3. Simulated practice emergencies

A2.8. Flight Risk Assessment Worksheet. If applicable.

Attachment 3**FORMATION BRIEFING GUIDE****A3.1. Ground Operations:**

- A3.1.1. Check-in procedures
- A3.1.2. ATC clearance
- A3.1.3. Engine start, Taxi procedures

A3.2. Takeoff:

- A3.2.1. Performance data
- A3.2.2. Interval
- A3.2.3. Emergency procedures/sympathetic abort

A3.3. Departure:

- A3.3.1. Routing
- A3.3.2. Airspeed/mach number
- A3.3.3. Intermediate level-off
- A3.3.4. Power settings
- A3.3.5. Turns/angle of bank
- A3.3.6. AN/APX-78

A3.4. Level Off:

- A3.4.1. Altitude, Airspeed/mach number

A3.5. Enroute:

- A3.5.1. Airspeed changes, position changes
- A3.5.2. Angle of bank
- A3.5.3. Climbs/descents

A3.6. Air Refueling:

- A3.6.1. Call signs
- A3.6.2. Track (altitudes, A/R frequencies, common A/A TACAN, beacon setting)
- A3.6.3. Priority (sequence/offload)
- A3.6.4. Rendezvous procedures (normal, overrun, breakaway)
- A3.6.5. Air Refueling formation (altitudes/spacing/turns into echelon)
- A3.6.6. Bingo fuel

A3.6.7. Abort point/base

A3.6.8. End A/R plans

A3.7. Orbit:

A3.7.1. Altitudes, orbit pattern

A3.8. Recovery:

A3.8.1. Breakup point

A3.8.2. Airspeeds for increased spacing

A3.8.3. Type penetration/approach

A3.9. Special Subjects:

A3.9.1. Lost wingman

A3.9.2. Radio discipline

A3.9.3. Debriefing (time and place)

A3.9.4. NOTAMS

A3.10. Questions and Remarks.

Attachment 4**E-8 PASSENGER BRIEFING GUIDE****A4.1. General:**

- A4.1.1. MCC and AC name
- A4.1.2. Mission duration/ETA at destination
- A4.1.3. Cruise altitudes
- A4.1.4. Weather enroute and at destination
- A4.1.5. Passenger on/off-load procedures

A4.2. Emergency Signals:**A4.2.1. Ground Evacuation:**

- A4.2.1.1. Signal for evacuation
- A4.2.1.2. Primary/secondary exits
- A4.2.1.3. Escape slides
- A4.2.1.4. Assembly areas

A4.2.2. Crash Landing/Ditching:

- A4.2.2.1. Signal for preparation
- A4.2.2.2. Signal for brace for impact

A4.2.3. Loss of Pressure:

- A4.2.3.1. Signal
- A4.2.3.2. Oxygen requirements

A4.3. Oxygen/Survival Equipment:

- A4.3.1. Assigned oxygen source--how to check/use system
- A4.3.2. Walk around bottles (location, use, refill stations, procedures)
- A4.3.3. LPUs--fitting and use (if applicable)

A4.4. Restrictions/Warnings:

- A4.4.1. Smoking
- A4.4.2. Lavatory
- A4.4.3. Seat belts
- A4.4.4. Bunks
- A4.4.5. Electronic devices (IAW AFI 11-202V3)

A4.5. Galley Area:

A4.5.1. Restrictions during refueling

A4.5.2. Coffee

A4.5.3. Lunches/meals

A4.5.4. Oven use

A4.5.5. Water

A4.5.6. Noise protection

A4.6. Miscellaneous:

A4.6.1. Follow crewmember instructions

A4.6.2. Brief passengers on any emergency drill

Attachment 5**IC 2001-01 TO AFI 11-2E8, VOLUME 3, E-8—OPERATIONS PROCEDURES****1 AUGUST 2001****SUMMARY OF REVISIONS**

This change transfers OPRship to ACC/DOYA. It also revises augmented crew requirements for mission crew members. A “|” indicates revised material since the last edition.

OPR: HQ ACC/DOYA (Maj Timothy P. Berry)

3.3. Aircrew Duty Period/Augmentation:

3.3.1. Aircrew Duty Period is 16 Hours. Augmented aircrew duty period is 24 hours. With any axis of the autopilot inoperative, limit the aircrew duty period to 12 hours and the augmented aircrew duty period to 16 hours.

3.3.1.1. An augmented flight crew will consist of a qualified pilot, navigator, and flight engineer in addition to the normal flight crew. Addition of flight crewmembers after the first takeoff in a crew duty period is not considered augmentation.

3.3.1.2. The operations group commander will determine the augmented mission crew composition depending upon mission requirements.